

PCT/DE01/26617

## Claims

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1. Cosmetic active substance preparation with a high radical protection factor, which comprises a content of

a) a product obtained by extraction of the bark of Quebracho blanco and subsequent enzymatic hydrolysis, containing at least

10 90 percent by weight of proanthocyanidine oligomers and up to 10 percent by weight of gallic acid, where the content of (a), which is available in a concentration of 2 percent by weight linked to a microcapsule ranges from 0.1 to 10 wt.%;

(b) an extract of the silkworm obtained by extraction, containing the peptide cecropine, amino acids and a vitamin mix, where the content of (b) ranges from 0.1 to 10 wt.%;

(c) a non-ionic, cationic or anionic hydrogel or mixture of hydrogels, where the content of (c) ranges from 0.1 to 5 wt%;

(d) one or several phospholipids in the range of 0.1 up to 30 wt.%;

(e) an ultrasound decomposition product of a yeast containing at least 150 units of superoxide dismutase per ml, wherein the content of the decomposition product is in the range from 0.5 to 4 percent by weight;

25 (f) one or more cyclodextrines selected from the group consisting of  $\beta$ - and  $\gamma$ -cyclodextrins with a share of 0.5 to 8 % by weight; and

(g) up to 100 percent by weight of water;  
related to the total weight of the active substance preparation  
30 each.

2. Preparation according to claim 1, characterised by additionally comprising an extract of acerola fruits Malpighia punifolia, wherein the content (g) is in the range from 1 to 30 wt.%; related to the total weight of the active substance preparation.

3. Preparation according to claim 1, characterised in that the portions of the components lie within the following ranges: active substance capsules according to (a) and (b) ranging from 0.5 to 3 wt.%, hydro gel according to (c) ranging from 0.1 to 3 wt.%, cyclodextrin and yeast decomposition product each in the range of 1 to 3 % by weight.

10 4. Preparation according to claim 1, characterised in a radical protection factor in the range from 100 to 3500, measured by determining the number of free radicals of a solution of a test substance ( $S_1$ ) by electron spin resonance (ESR) as compared with the ESR measurement result of the cosmetic active substance preparation according to the relationship

15  $RPF = (RC \times RF) / PI$ , where  $RF = (S_1 - S_2) / S_1$ ;  $RC$  = concentration of the test substance (radicals per ml);  $PI$  = concentration of the active substance preparation (mg per ml).

5. Preparation according to claim 1, characterised in that the extract (a) contains at least 99 wt.% of proanthocyanidine oligomers and up to 1 wt.% of gallic acid.

6. Preparation according to claim 1, characterised in that the  
amino acids contained in (b) comprise aspartine acid, asparagi-  
ne, threonine, serine, glutamic acid, proline, glycine,  
alanine, valine, cysteine, methionine, isoleucine, leucine,  
tyrosine, phenylalanine, lysine, histidine, arginine.

30 7. Preparation according to claim 1, characterised in that the active substance preparation contains portions of the components (a) and (b) each in the range of 0.1 to 3 % by weight.

35 8. Preparation according to claim 1, characterised in that the active substance preparation exists as cosmetic composition, further comprising one or several of the following components:  
(1) extracts or treated extracts binding free radicals or

moisture of

(1.1) plants selected among acerola fruits (*Malpighia punidifolia*), *Camellia oleifera*, *Colunsonia canadensis* and *Hibiscus sabdariffa*; or

5 (1.2) algae selected among omega plankton, providing a high portion of cerebrosid stimulants, microalgae of the chlorella species and macro algae of the ulva species associated with byssus (mussel silk) as biotechnological protein fraction and subsequently associated with dextrine, wherein the product  
10 appears in the mixture with peptide derivates derived from  $\alpha$ -MSH and associated with xanthin;

(2) yeast decomposition products selected among baker's yeast, brewer's yeast, wine yeast and made according to a non-harming ultrasound treatment of the aqueous yeasts;  
15 (3) natural and synthetic polymers selected among chitosan-glycolate, condensed products of desiccated milk, and activated fatty acids;

(4) magnetically hard single crystals of bariumhexaferrite having a coercitive field intensity of 3000 - 5000 Oe and a grain size of 50-1200 nm intercalated in or mixed with asymmetric lamellar aggregates of phospholipids and fluorocarbons ; and

(5) other active substances selected among chitosanglycolate, hyaluronic acid, omega CH activator, behentrimonium chloride, passion flower oil and carrier substances;  
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(6) mixtures thereof.

9. Preparation according to claim 1, characterized in that it comprises an additional portion of 0.1 to 20 wt.% of plant extracts selected from the group consisting of citrus peel or leaf extracts (*Citrus bigaradia*, *Citrus hystrix*, *Citrus aurantifolia*, *Citrofurtunella microcarpa*, *Citrus aurantium*, *Citrus reticulata*), petitgrain extract (peel or fruit), extract of the Spanish cherry, kiwi extract (*Actinidia chinensis*), papaya fruit extract (*Caricae papayae*), tea extract [leaves of green or black tea, leaves or bark of new jersey tea (*Ceanthus*

velutinas)], coffee bean extract (INCI name: coffee bean extract; of green or roasted beans), prunus extract (Prunus armeniaca, Prunus dulcis, Prunus persica, Prunus domestica, Prunus spinosa, Prunus serotina, Prunus virginiana), extracts of the bark of the Mexican skin tree (*Mimosa tenuiflora*), angelica root extract (*Angelica archangelica*), Pongamia pinnata extract, tomato extract and the remaining portion of carrier substances or other active substances and carrier substances.

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10 10. Cosmetic preparation, characterised in a content of 0.5 to 40 wt.% of plant extracts selected from the group consisting of Pongamia pinnata extract, tomato extract and mixtures thereof, and 99.5 to 60 wt.% of carrier substances or other active substances.

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11. Use of the cosmetic substance preparation with high radical protection factor according to each of claims 1 through 10 in combination with other cosmetic substances such as other active substances, auxiliary substances and carrier substances in cosmetic preparations such as creams, gels, lotions, masks, makeup's, shampoos, sticks, oils, mascara, corresponding sun protection preparations as well as tooth paste and mouthwashes.